ENTERPRISE INFORMATION SERVICES
DUTY STATEMENT

Section	EIS
Unit	Network Engineer
Position Number	065-649-1373-003
Classification	System Software Specialist II (Technical)
Revised Date	June, 2016

Supervision: The System Software Specialist II Technical (SSS II Tech) will function under the general direction of the Network Engineering Supervisor. The incumbent will be responsible for the overall California Department of Corrections (CDCR) network architectural design and re-engineering of the infrastructure for each Adult Institution and Juvenile Justice location. The SSSII will assist in providing executive management with Information Technology (IT) direction and specific IT goals to meet CDCR's strategic business objectives. The incumbent will work both independently and in a team environment to perform organizational IT decision-making and technical direction for the CDCR.

Knowledge: This is an expert technical level position and the incumbent must be familiar with high level electronic computer systems, data communications, software programming, installation, maintenance, and troubleshooting. The incumbent must have knowledge of all electronic data processing equipment and its capabilities and interfaces between hardware and software. The incumbent must possess an expert level of knowledge required to manage hardware and software in a statewide data network of the highest complexity. The incumbent must understand router and switch configurations, network design, concepts of firewall administration, VPN, IP Addressing, Load Balancing, wireless network configuration, DNS and complex network troubleshooting. The incumbent must possess extensive knowledge, with respect to data processing concepts, practice, methods, and principles along with an in-depth understanding of evolving industry trends and standards. The incumbent must be knowledgeable and experienced with project management principles, techniques and enterprise network security.

Guidelines: The incumbent is responsible for establishing procedures, system policies, operations and reference materials for the services provided. The incumbent must use his/her judgment to determine the scope and depth of guidelines for services under their responsibility.

Complexity: The breadth of the position includes developing and ensuring availability of data services for an enterprise network environment for departmental business applications and systems management. The impact of these services affects all business areas utilizing the CDCR computing resources for their business processes. When considering service enhancements or additions, the incumbent is responsible to identify impacts, determine appropriate methodology and procedures, and recommend alternatives for the CDCR enterprise. The incumbent must ensure the integration of multiple services occurs without service impact to customers. The incumbent demonstrates skills and qualities required for effective project management, team leadership and plays a key role in the success of the department's IT deployments and to the business as a whole. The incumbent possesses leadership ability needed to mentor organizational staff and relate to CDCR program management and staff.

Scope and Effect: The services and decisions the incumbent is responsible to provide affect a large number of CDCR business areas, mission critical and non-mission critical. The scope of the work involves planning, developing and implementing technological solutions that are essential to the mission of the overall organization and/or affect a large number of CDCR business areas on a long-term basis. The incumbent is responsible and authorized to make significant technical decisions for the security of the enterprise's data.

Personal Contact: The incumbent represents CDCR to external entities and advises CDCR IT and program management on the planning, development, implementation and coordination of IT issues. This includes the operations, maintenance, installation and construction of information systems. The incumbent advises technical staff and system users to provide and make recommendations regarding systems and problems requiring resolutions. There is regular contact with IT staff, management, and external entities to coordinate problem resolution and ensure conformity of methods and practices. The incumbent contacts users to discuss business and system requirements, contractors to provide contract oversight and contact vendors to discuss existing or new technology. The incumbent communicates effectively, both orally and in writing, with subordinates, peers, clients and customers at all levels. The incumbent demonstrates high level communications and interpersonal skills.

Purpose of Contacts: The incumbent is familiar with customer business program areas, practices, and Information Technology (IT) service requirements. The incumbent possesses the ability to provide quantitative information, and consider and value differing viewpoints, goals, or objectives. The incumbent possesses the ability to motivate, persuade and lead individuals or groups.

The duties of the incumbent include, but are not limited to the following:

40%- Systems Engineering/Architecting
- Capacity Planning for WAN/LAN
- Software Testing and Evaluation
- Hardware Testing and Evaluation
- Architect network standards
- Review and make recommendations on D&E's
- Perform security analysis and apply firewall changes
- IPAM and DHCP management
- VPN management
- Load Balancer administration
- Network Proxy management
- Manage core and distribution routers and switches
- Wireless network design, configuration and support
- Develop complex configuration templates
- Provide training
- Bandwidth Utilization testing
- Develop impact assessments
- Make application, production and operation presentations to management
- Propose and/or modify service level agreements
- Develop technical proposals
- Determine impact of upgrades to existing data communications and services

- Evaluate and recommend approval/rejection of new data communications and special purpose vendor supplied applications
- Analyze, test, install operating data communications and utility software upgrades and patches
- Coordinate and ensure effective operations of complex multi-tier environments
- Perform configuration management tasks
- Evaluate and recommend approval/rejection of firewall changes
- Set configuration standards and conventions
- Technical advisor to application development, database, operations and security staff
- Technical advisor in meetings
- Technical advisor to other customers, IT staff, vendors and contractors

30% - Operations (routine tasks and activities)
- Implement existing policies, standards and procedures
- Document data communications configuration for wired and wireless networks
- Create and implement policies, standards and procedures
- Review and approve system and service policies, standards and procedures
- Collect, monitor and report costs, schedules, and benefits for department data services and projects
- Review and approve hardware installation procedures
- Review and approve hardware/software migration/conversion procedures
- Review and approve operating procedures for each project or service
- Review and approve backup and recovery plans and procedures
- Review and approve disaster recovery plans and procedures
- Maintain version control of operating system and special purpose vendor supplied application software and licenses
- Provide capacity planning
- Conduct training of new staff to various units in the Department
- Monitor and analyze efficiency of utilities/tools and reports
- Maintain system policy, standard and procedure documentation
- Maintain hardware installation procedure documentation
- Maintain operational procedure documentation for each system
- Maintain disaster recovery plan and procedure documentation
- Review and approve post-implementation evaluation reviews

20% - Service Disruptions
- Assist with data communications troubleshooting;
- Provide third level Help Desk support;
- Provide communications expertise and assistance for production incidents on a 24-hour availability basis;
- Act as liaison with vendors to report/troubleshoot special purpose vendor supplied application software problems;
- Identify and resolve problems with system and configuration software;
- Prepare/review disruption reports and correction plans;
- Data communications research/problem solving within wired and wireless networks.

10% - Project Management
- Assist in review of Request for Proposals (RFP), Feasibility Study Reports (FSR), Post-Implementation Evaluation & Review (PIER);
- Perform simple project management, reporting tasks and implementation plans;
- Implement existing policies, standards and procedures;
- Propose and/or modify service level agreements;
- Develop contingency plans;
- Perform capacity planning for growth;

Employee: _____   Date: _____

Immediate Supervisor: _____   Date: _____